

# What we do and why

## INEX Member Meeting



7 December 2017

Bijal Sanghani  
bijal at euro-ix dot net  
Twitter: @euroix

# What is Euro-IX?

## Membership organisation for IXPs

- Two fora per year
- Developing a new website, database and tools
- Various reports:
  - Benchmarking club
  - IXPs stats
  - Traffic at IXPs
  - Switches and Route Server at IXPs
- Support Programs
  - Fellowship
  - Mentor-IX

# ➤ Talk to us and each other

- Interested in IXPs, join the open discussion mailing list <https://lists.ix-f.net/mailman/listinfo/tech-discuss>
- Newsletter – Subscribe here:
  - [euro-ix.net/news-and-events/newsletter/](http://euro-ix.net/news-and-events/newsletter/)
- Working Groups
- Social Media
  - Twitter @euroix
  - Facebook [fb.me/maineuroix](https://fb.me/maineuroix)
  - YouTube [youtube.com/channel/UCFyucVRAAMzxyJIsxnGwsjw](https://youtube.com/channel/UCFyucVRAAMzxyJIsxnGwsjw)

# ➤ Association / Club for IXPs

## 84 affiliated IXPs:

- 56 IXPs from Europe - 49 Countries, operating over 100 Peering LANs
- 28 IXPs from the rest of the world
- Newest Members:
  - Digital Realty
  - Beirut-IX

## ➤ 13 Patrons in 2017

- Arista
- Brocade
- Ciena
- Coriant
- ECI Telecom
- Equinix
- Extreme Networks
- Huawei
- Interxion
- Juniper Networks
- MRV
- Nokia
- Telehouse

# ➤ Internet eXchange Federation

- The Internet eXchange Federation (IX-F) is a platform for affiliated Internet eXchange Point Associations (IXPAs) to share best practice and establish parity in internet accessibility and functionality on a global scale.
- IXPAs members of IX-F include:
  - AFIX – Africa
  - APIX – Asia Pacific
  - Euro-IX – Europe
  - LAC-IX – Latin America & Caribbean
- Representing over 200 IXPs around the world



# IXP Database & Tools

# ➤ IXP Database & Tools


- With the growing number of networks moving to automate more and more operational tasks the Euro-IX community decided we needed to have a trusted, reliable, accurate and complete database on IXPs
- Under construction under a Internet eXchange federation (IX-F) Project
- Goal is to build a global comprehensive database on IXPs



# IXP Database & Tools

- Key Features:
  - A central source of comprehensive data on IXPs including;
    - essential contact information, name, emails
    - connected IP Addresses and ASNs
    - connected MAC Addresses
    - port speeds
    - traffic levels
    - switch capacity
    - hardware brands
    - software services
    - facility information
    - and more...

# ➤ IXP Database & Tools

- Direct data export from IXPs via:
  - IXP Manager 
  - APIs
- Integration of third party data:
  - PeeringDB – data center & network
  - RIRs - whois
  - IRR - whois

helps to provide a comprehensive view of the interconnection ecosystem and encourages data clean-up by increasing its visibility

# ➤ IXP Database and Tools

- IX-F Member List:
  - Currently contains ASNs (IXP member list)
  - Building a new schema to be able to import more data
  - Human readable tools and resources to help access and analyze the data
- Source available on GitHub;  
<https://github.com/euro-ix/json-schemas>
- IXF Member List Directory - <http://ml.ix-f.net>

# IXP Database & Tools

## Benefits Case:

- Access to trusted real-time data which can be used directly or via other systems to:
  - make informed network strategy decisions
  - generate configurations for routers
  - be used for other purposes related to peering and network management.
- No manual input, reduces human error
- Provides insight into regional trends and enhancements
- Encourages IXPs to follow best common practices (BCPs)
- Multiple IXP data is available from a single source (API) in a standard format
- Promotes innovation to increase automation

# ➤ IXP Database & Tools

## Where are we?

- IXP Manager has a built in export to the database
  - Currently 51 IXP use IXP Manager
    - 25 in Europe
    - 26 rest of the world



- Encouraging IXPs to use IXP Manager – especially new/smaller ones
- Planned IXP Manager tutorial at APRICOT 2018 & Euro-IX fora
- Looking to create videos/online learning tools for IXPs wanting to do it themselves
- Larger IXPs already have APIs in place - <https://db.ix-f.net/api/ixp>

**Database will go live in February, along with a new Euro-IX website!**



# Euro-IX Projects

# ➤ Route Servers

- Draft for route server large communities document on GitHub -

<https://github.com/euro-ix/rs-workshop-july-2017/wiki/Route-Server-BGP-Community-usage>

- Route server features list

<https://github.com/euro-ix/rs-workshop-july-2017/wiki/RS-Features-list-and-details>

# ➤ Spamhouse Issues

## Issues with Spamhouse blocking IXP internal IPs

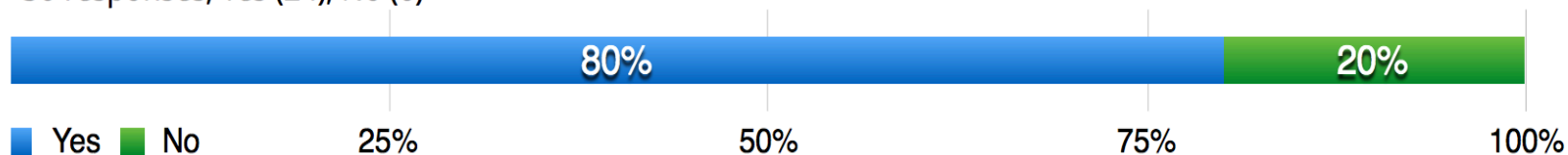
- Spamhouse asked some Euro-IX members to disconnect some networks they believed to be spammers or have customers who engage in spam
- We acknowledge the damage that Spam and related abuse does
- Spamhaus has black-listed IXP mail servers, which causes communication issues between IXP operators and it's participants
- Engaged with Spamhouse and looking at next steps how we can work together to stop this happening again.



# > Euro-IX Reports

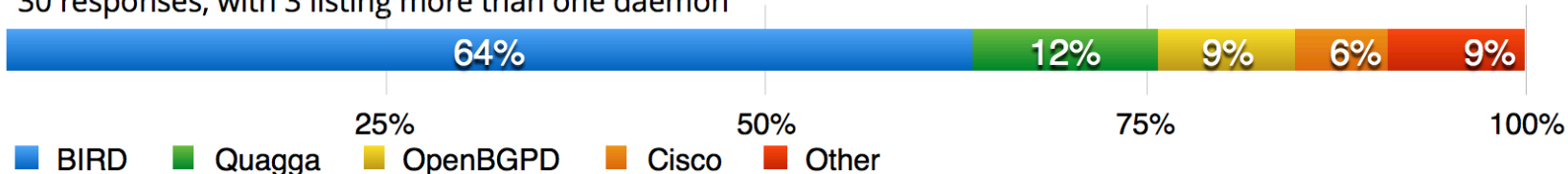
## 37/ Do you currently use Route Servers?

30 responses, Yes (24), No (6)



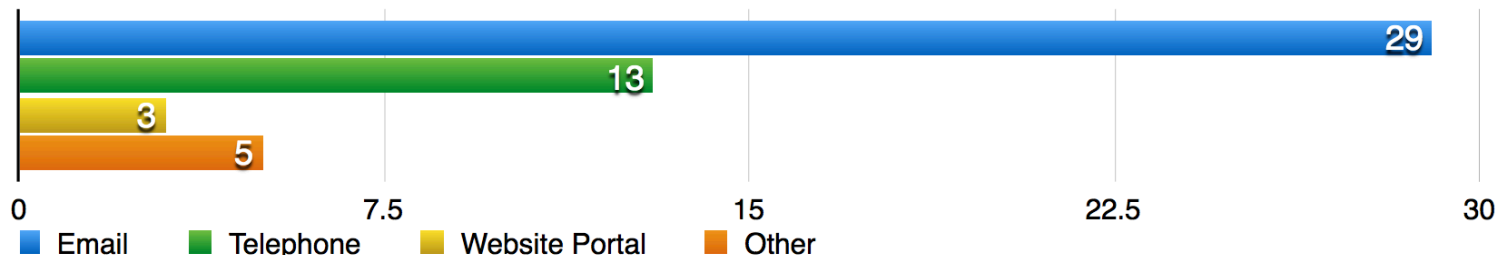
## 41/ If you use Route Servers, which one do you use?

30 responses, with 3 listing more than one daemon



## 52/ By what method do you receive the most service requests?

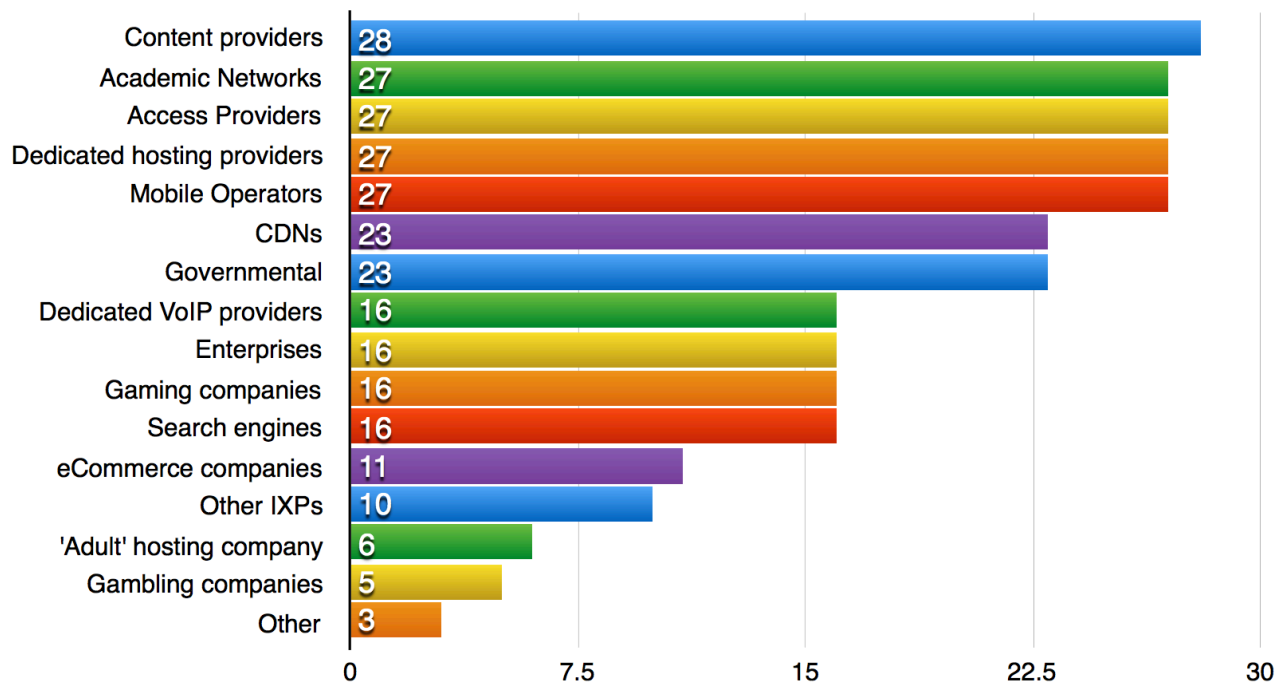
Multiple responses, Email 29, Telephone 13, Website 3, Others 5 (IRC (2), Facebook, Twitter, Skype)



# > Euro-IX Reports

## 56/ Do you have any of the following types of members/customers at your exchange?

281 responses, multiple answers per IXP



# ➤ Fellowships & Mentor-IX

## Programs to support IXPs

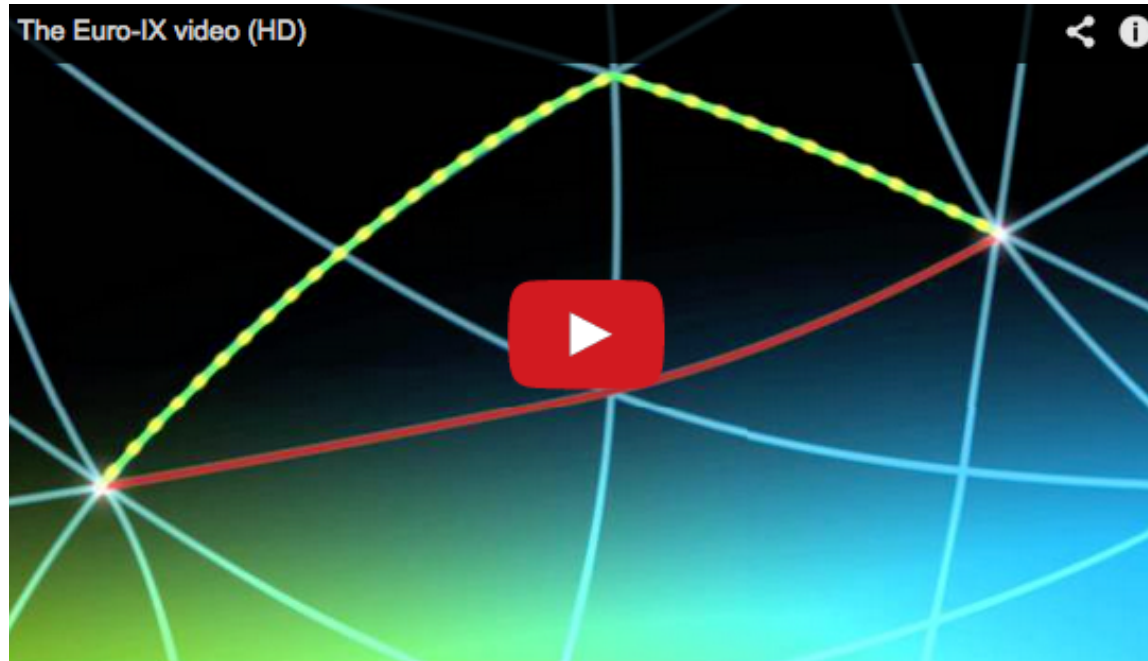
- ❖ 28th Forum, one fellow Nico Tshintu Bakajika, KINIX (DRC)
- ❖ 29th Forum, two fellows, Mauricio Oviedo, CRIX (Costa Rica) and Leonard Obonyo KIXP (Kenya)
- ❖ 30th Forum, five fellows, Mauricio Oviedo, CRIX, Fabian Mejia, NAP.ec, Nico Tshintu Bakajika, KINIX, Ahmed Bakhat Masood, PKIX and Leonard Obonyo, KIXP

Further information about the fellowship can be found -

<https://www.euro-ix.net/ixps/support-ixps/fellowship-program/>

**Thanks to Sponsors DE-CIX, RIPE NCC, ISOC, INEX, FICIX  
and InterLAN**

# ➤ Internet Revealed, a film about IXPs



<https://www.youtube.com/channel/UCFyucVRAAMzxyJIsxnGwsjw>

Available in French, German, Portuguese, Italian, Spanish, Romanian, Arabic, Russian, Czech, Greek, Mandarin and Japanese!

Interested in translating the video in your Language? Contact us!



# PeeringDB Update

# ➤ What is PeeringDB?

**Mission statement:** “PeeringDB, a nonprofit member-based organization, facilitates the exchange of user maintained interconnection related information, primarily for Peering Coordinators and Internet Exchange, Facility, and Network Operators.”

- A PeeringDB record makes it easy for people to find you, and helps you to establish peering
- If you aren't registered in PeeringDB, you can register at <https://www.peeringdb.com/register>
- We use basic verification for new accounts and require current whois information, so please
  - Update and maintain your whois information
  - Register from a company email address



# PeeringDB – New features

- Facilities and exchanges can now update their own info
  - Networks are still required to associate their record at a facility or exchange
- Multiple records of any type can be associated with an organization
  - Simpler organization management with a single account for network, facility, exchange records
- One account can manage multiple organizations
  - Manage all of the things with a single account
- Users can manage their accounts
  - Admin account for an organization can delegate fine-grained permissions
- Contact info has permissions
  - Private/users/public permissions
  - All users must register, no more guest account
  - Public view can see all info except contact info (no login needed)
- APIs and local database sync
  - Sync PeeringDB to a local database in any engine format

# ➤ PeeringDB Committies

## Admin Committee

- Manage administration of user accounts and PeeringDB records
- Answer support tickets

Leads: Arnold Nipper (Chair) and Bijal Sanghani (Vice Chair)

Contact:

[admincom@lists.peeringdb.com](mailto:admincom@lists.peeringdb.com)

## Operations Committee

- Manage PeeringDB infrastructure

Leads: Job Snijders (Chair) and Aaron Huges (Vice Chair)

Contact:

[pdb-ops@lists.peeringdb.com](mailto:pdb-ops@lists.peeringdb.com)

## Product Committee

- Ask for input from the community on desired features
- Manage roadmap and development priorities
- Write SoWs to solicit bids to complete requested features

Leads: Eric Loos (Chair) and Matt Griswold (Vice Chair)

Contact:

[productcom@lists.peeringdb.com](mailto:productcom@lists.peeringdb.com)



# ➤ Information & Resources

- Announce list:  
<http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-announce>
- Governance list:  
<http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-gov>
- Technical list:  
<http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-tech>
- User Discuss list:  
<http://lists.peeringdb.com/cgi-bin/mailman/listinfo/user-discuss>
- Docs, presentations, guides, tools:  
<http://docs.peeringdb.com/>
- Board and Officers:  
[stewards@lists.peeringdb.com](mailto:stewards@lists.peeringdb.com)
- Admins: [support@peeringdb.com](mailto:support@peeringdb.com)
- Presentation requests:  
[productcom@lists.peeringdb.com](mailto:productcom@lists.peeringdb.com)
- Uptime status:  
<http://status.peeringdb.com/>
- Bugs and feature requests:  
<https://github.com/peeringdb/peeringdb/>
- Social media
  - Twitter [@PeeringDB](https://twitter.com/PeeringDB)
  - Facebook  
<https://www.facebook.com/peeringdb/>
  - LinkedIn  
<https://www.linkedin.com/company/peeringdb>



# Thank you!

Bijal Sanghani

